ABSTRACT

An adaptive noise suppression system includes an input A/D converter, an analyzer, a filter, and a output D/A converter. The analyzer includes both feed-forward and feedback signal paths that allow it to compute a filtering coefficient, which is input to the filter. In these paths, feed-forward signal are processed by a signal to noise ratio estimator, a normalized coherence estimator, and a coherence mask. Also, feedback signals are processed by a auditory mask estimator. These two signal paths are coupled together via a noise suppression filter estimator. A method according to the present invention includes active signal processing to preserve speech-like signals and suppress incoherent noise signals. After a signal is processed in the feed-forward and feedback paths, the noise suppression filter estimator then outputs a filtering coefficient signal to the filter for filtering the noise out of the speech and noise digital signal.